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=> s receptor for advanced glycation end?/ab,bi

'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
  2 FILES SEARCHED...
'AB' IS NOT A VALID FIELD CODE
  4 FILES SEARCHED...
L1       158 RECEPTOR FOR ADVANCED GLYCATION
END?/AB,BI

=> s presenilin-2/ab,bi

'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
L2       881 PRESENILIN-2/AB,BI

=> s l1 and l2

L3         0 L1 AND L2

=> s amyloid?/ab,bi

'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE

L4      72912 AMYLOID?/AB,BI

=> s l1 and l4

L5         44 L1 AND L4

=> dup rem l5

PROCESSING COMPLETED FOR L5
L6         21 DUP REM L5 (23 DUPLICATES REMOVED)

=> d l- bib ab

YOU HAVE REQUESTED DATA FROM 21 ANSWERS -
CONTINUE? Y/(N):y


L6  ANSWER 1 OF 21  CAPLUS  COPYRIGHT 1999 ACS
AN  1999:265908  CAPLUS
DN  130:301683
TI  Ligand-binding site of RAGE ( ***receptor***  for
***advanced***
    ***glycation***  ***endproduct*** ) for therapeutic use
IN  Stern, David; Yan, Shi Du; Schmidt, Ann Marie; Lamster, Ira
PA  The Trustees of Columbia University In the City of New York,
USA
SO  PCT Int. Appl., 101 pp.
    CODEN: PIXXD2
DT  Patent
LA  English
FAN.CNT 1
    PATENT NO.      KIND  DATE         APPLICATION NO.
DATE
    --------------  ----  --------     --------------  --------
PI  WO 9918987      A1    19990422     WO 1998-US21346
19981009
        W:  AU, CA, JP, MX
        RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT,
LU, MC, NL,
            PT, SE
    AU 9897958      A1    19990503     AU 1998-97958   19981009
PRAI US 1997-948131  19971009
    WO 1998-US21346  19981009
AB  The present method provides for an isolated peptide having an
amino acid
    sequence corresponding to the amino acid sequence of a V-domain
of a
    ***receptor***  for  ***advanced***  ***glycation***
***end***
    product (RAGE). The present invention also provides for an
isolated
    peptide having an amino acid sequence
A-Q-N-I-T-A-R-I-G-E-P-L-V-L-K-C-K-G-
    A-P-K-K-P-P-Q-R-L-E-W-K (Seq. ID No. 1). The present
invention provides
    for a pharmaceutical compn. comprising a therapeutically effective
amt. of
    an isolated peptide having an amino acid sequence corresponding to
the
    amino acid sequence of a V-domain of RAGE. The present
invention also
    provides for a method for inhibiting interaction of an
***amyloid***
    -.beta. peptide with a  ***receptor***  for  ***advanced***
    ***glycation***  ***end***  product which is on the surface
of a cell,
    which comprises contacting the cell with the peptide or a
functionally
    equiv. agent, wherein the peptide or agent is capable of inhibiting
    interaction of the  ***amyloid***  -.beta. peptide with the
    ***receptor***  for  ***advanced***  ***glycation***
***end***
    product, and the peptide or agent is present in an amt. effective to
    inhibit interaction of the  ***amyloid***  -.beta. peptide with the
    ***receptor***  for  ***advanced***  ***glycation***
***end***
    product.

L6  ANSWER 2 OF 21  MEDLINE                          DUPLICATE 1
AN  1999321925  MEDLINE
DN  99321925
TI  ***Receptor***  for  ***advanced***  ***glycation***
***end***
    products (RAGE)-mediated neurite outgrowth and activation of
NF-kappaB
    require the cytoplasmic domain of the receptor but different
downstream
    signaling pathways.
AU  Huttunen H J; Fages C; Rauvala H
CS  Laboratory of Molecular Neurobiology, Institute of
Biotechnology, and
    Department of Biosciences, Division of Biochemistry, University
of
    Helsinki, Finland.. Henri.Huttunen@helsinki.fi
SO  JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Jul 9) 274
(28) 19919-24.
    Journal code: HIV. ISSN: 0021-9258.
CY  United States
DT  Journal; Article; (JOURNAL ARTICLE)
LA  English
FS  Priority Journals; Cancer Journals
EM  199910
EW  19991001
AB  ***Receptor***  for  ***advanced***  ***glycation***
***end***
    products (RAGE) mediates neurite outgrowth in vitro on
amphoterin-coated
    substrates. Ligation of RAGE by two other ligands, advanced
glycation end
    products or  ***amyloid***  beta-peptide, is suggested to play a
role in
    cell injury mechanisms involving cellular oxidant stress and
activation of
    the transcription factor NF-kappaB. However, the RAGE signaling
```

pathways
in neurite outgrowth and cell injury are largely unknown. Here we show
that transfection of RAGE to neuroblastoma cells induces extension of
filopodia and neurites on amphoterin-coated substrates. Furthermore,
ligation of RAGE in transfected cells enhances NF-kappaB-dependent
transcription. Both the RAGE-mediated neurite outgrowth and activation of
NF-kappaB are blocked by deletion of the cytoplasmic domain of RAGE.
Moreover, dominant negative Rac and Cdc42 but not dominant negative Ras
inhibit the extension of neurites induced by RAGE-amphoterin interaction.
In contrast, the activation of NF-kappaB is inhibited by dominant negative
Ras but not Rac or Cdc42. These data suggest that distinct signaling
pathways are used by RAGE to induce neurite outgrowth and regulate gene
expression through NF-kappaB.

L6 ANSWER 3 OF 21 MEDLINE DUPLICATE 2
AN 1999182371 MEDLINE
DN 99182371
TI Activation of ***receptor*** for ***advanced*** ***glycation***
end products: a mechanism for chronic vascular dysfunction in
diabetic vasculopathy and atherosclerosis.
AU Schmidt A M; Yan S D; Wautier J L; Stern D
CS Division of Surgical Science, Department of Surgery, College of Physicians
& Surgeons of Columbia University, New York, NY 10032, USA.
SO CIRCULATION RESEARCH, (1999 Mar 19) 84 (5) 489-97.
Ref: 89
Journal code: DAJ. ISSN: 0009-7330.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199905
EW 19990504
AB ***Receptor*** for ***advanced*** ***glycation*** ***end***
products (RAGE) is a member of the immunoglobulin superfamily of cell
surface molecules and engages diverse ligands relevant to distinct
pathological processes. One class of RAGE ligands includes glycoxidation
products, termed advanced glycation end products, which occur in diabetes,
at sites of oxidant stress in tissues, and in renal failure and
amyloidoses . RAGE also functions as a signal transduction receptor
for ***amyloid*** beta peptide, known to accumulate in Alzheimer
disease in both affected brain parenchyma and cerebral vasculature.
Interaction of RAGE with these ligands enhances receptor expression and
initiates a positive feedback loop whereby receptor occupancy triggers
increased RAGE expression, thereby perpetuating another wave of cellular
activation. Sustained expression of RAGE by critical target cells,
including endothelium, smooth muscle cells, mononuclear phagocytes, and
neurons, in proximity to these ligands, sets the stage for chronic
cellular activation and tissue damage. In a model of accelerated
atherosclerosis associated with diabetes in genetically manipulated mice,
blockade of cell surface RAGE by infusion of a soluble, truncated form of
the receptor completely suppressed enhanced formation of vascular lesions.
Amelioration of atherosclerosis in these diabetic/atherosclerotic animals
by soluble RAGE occurred in the absence of changes in plasma lipids or
glycemia, emphasizing the contribution of a lipid- and
glycemia-independent mechanism(s) to atherogenesis, which we postulate to
be interaction of RAGE with its ligands. Future studies using mice in
which RAGE expression has been genetically manipulated and with selective
low molecular weight RAGE inhibitors will be required to definitively
assign a critical role for RAGE activation in diabetic vasculopathy.
However, sustained receptor expression in a microenvironment with a
plethora of ligand makes possible prolonged receptor stimulation,
suggesting that interaction of cellular RAGE with its ligands could be a
factor contributing to a range of important chronic disorders.

L6 ANSWER 4 OF 21 EMBASE COPYRIGHT 1999 ELSEVIER SCI. B.V.DUPLICATE 3
AN 1999366373 EMBASE
TI cDNA cloning of a novel secreted isoform of the human ***receptor***
for ***advanced*** ***glycation*** ***end*** products and
characterization of cells co-expressing cell-surface scavenger receptors
and Swedish mutant ***amyloid*** precursor protein.
AU Malherbe P.; Richards J.G.; Gaillard H.; Thompson A.; Diener C.; Schuler
A.; Huber G.
CS P. Malherbe, Pharma Division PRPN, Bldg. 69/333, Preclinical CNS Research,
Basel CH-4070, Switzerland. parichehr.malherbe@roche.com
SO Molecular Brain Research, (1999) 71/2 (159-170).
Refs: 26
ISSN: 0169-328X CODEN: MBREE4
PUI S 0169-328X(99)00174-6
CY Netherlands
DT Journal; Article
FS 008 Neurology and Neurosurgery
029 Clinical Biochemistry
LA English
SL English
AB The ***receptor*** for ***advanced*** ***glycation***
end products (RAGE) has been proposed as a cell surface receptor
that binds ***amyloid*** -.beta. protein (A.beta.), thereby triggering
its cytotoxic effects [S.D. Yan, X. Chen, J. Fu, M. Chen, H. Zhu, A.
Roher, T. Slattery, L. Zhao, M. Nagashima, J. Morser, A. Migheli, P.
Nawroth, D. Stern, A.M. Schmidt, RAGE and ***amyloid*** -.beta. peptide
neurotoxicity in Alzheimer's disease, Nature 382 (1996) 685-691.]. A cDNA
library of human lung was screened for RAGE with an appropriate
hybridization probe. In addition to cell surface RAGE, one clone was found
which encodes a new version of RAGE, termed hRAGEsec, which lacks the 19
amino acids of the membrane-spanning region and is therefore secreted.
Comparison with the genomic sequence revealed that the synthesis of the
secreted isoform requires alternative splicing. The deduced protein
sequence of the mature hRAGEsec consists of 321 amino acids with a
predicted molecular mass of 35.66 kDa. The pattern of expression of
hRAGEsec in human brain was analyzed by in situ hybridization
histochemistry. The most intense expression of the gene in contrast to
cell surface RAGE was detected in hippocampal CA3 pyramidal cells, dentate
gyrus granule cells, cortical neurons as well as glial cells in white
matter. To investigate the interaction between A.beta. and RAGE and
another scavenger receptor, SRA, under physiological conditions, they were
co-expressed with human .beta.APP695-SFAD in a human cell and the level of
A.beta. in the condition medium was assessed by immunoprecipitation and
enzyme-linked immunosorbent assay (ELISA) analysis. A nearly 100%
reduction of A.beta. from the conditioned medium of hRAGE cells

and
.apprx.40% reduction from the SRA-cells implied that hRAGE could be a
prominent cell surface receptor interacting with A.beta..

L6 ANSWER 5 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1999:81096 BIOSIS
DN PREV199900081096
TI cDNA Cloning of a novel secreted isoform of the human ***receptor***
for ***advanced*** ***glycation*** ***end*** products (RAGE)
and characterization of cells co-expressing cell-surface scavenger
receptors and Swedish mutant ***amyloid*** precursor protein.
AU Malherbe, P.; Richards, J. G.; Gaillard, H.; Thompson, A.; Diener, C.;
Schuler, A.; Huber, G.
CS Pharma Div., Preclinical CNS Res., F. Hoffmann-La Roche Ltd., CH-4070
Basel Switzerland
SO Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 1709.
Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part 2
Los Angeles, California, USA November 7-12, 1998
ISSN: 0190-5295.
DT Conference
LA English

L6 ANSWER 6 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1999:80034 BIOSIS
DN PREV199900080034
TI ***Amyloid*** -beta peptide: Structure and neuro-toxicity.
AU Hashimoto, T.; Omae, H.; Kobayashi, K.; Miyagawa, T.; Watanabe, T.;
Nakagawa, M.; Kuwada, M.; Ogura, H.; Nishizawa, Y.
CS Eisai Tsukuba Res. Lab., Eisai Co. Ltd., Tsukuba, Ibaraki 300-2635 Japan
SO Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 1461.
Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part 2
Los Angeles, California, USA November 7-12, 1998
ISSN: 0190-5295.
DT Conference
LA English

L6 ANSWER 7 OF 21 MEDLINE DUPLICATE 4
AN 1998376482 MEDLINE
DN 98376482
TI Human blood-brain barrier receptors for Alzheimer's ***amyloid*** -beta
1-40. Asymmetrical binding, endocytosis, and transcytosis at the apical
side of brain microvascular endothelial cell monolayer.
AU Mackic J B; Stins M; McComb J G; Calero M; Ghiso J; Kim K S; Yan S D;
Stern D; Schmidt A M; Frangione B; Zlokovic B V
CS Department of Neurological Surgery, USC School of Medicine, Los Angeles,
California 90033, USA.
NC NS-34467 (NINDS)
AG-14526 (NIA)
AG-05891 (NIA)
SO JOURNAL OF CLINICAL INVESTIGATION, (1998 Aug 15) 102 (4) 734-43.
Journal code: HS7. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 199811
EW 19981103
AB A soluble monomeric form of Alzheimer's ***amyloid*** -beta (1-40)
peptide (sAbeta1-40) is present in the circulation and could contribute to
neurotoxicity if it crosses the brain capillary endothelium, which
comprises the blood-brain barrier (BBB) in vivo. This study characterizes
endothelial binding and transcytosis of a synthetic peptide homologous to
human sAbeta1-40 using an in vitro model of human BBB. 125I-sAbeta1-40
binding to the brain microvascular endothelial cell monolayer was time
dependent, polarized to the apical side, and saturable with high- and
low-affinity dissociation constants of 7.8+/-1.2 and 52.8+/-6.2 nM,
respectively. Binding of 125I-sAbeta1-40 was inhibited by anti-RAGE (
receptor for ***advanced*** ***glycation*** ***end***
products) antibody (63%) and by acetylated low density lipoproteins (33%).
Consistent with these data, transfected cultured cells overexpressing RAGE
or macrophage scavenger receptor (SR), type A, displayed binding and
internalization of 125I-sAbeta1-40. The internalized peptide remains
intact > 94%. Transcytosis of 125I-sAbeta1-40 was time and temperature
dependent, asymmetrical from the apical to basolateral side, saturable
with a Michaelis constant of 45+/-9 nM, and partially sensitive to RAGE
blockade (36%) but not to SR blockade. We conclude that RAGE and SR
mediate binding of sAbeta1-40 at the apical side of human BBB, and that
RAGE is also involved in sAbeta1-40 transcytosis.

L6 ANSWER 8 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1999:52659 BIOSIS
DN PREV199900052659
TI Rage mediates in vivo transport of Alzheimer's Abeta1-40 and Abeta1-42
peptides at the blood-brain barrier in rodents.
AU Miao, W. (1); Mackic, J. B.; Ghiso, J.; Yamada, S.; Jovanovic, S.; McComb,
J. G.; Van Nostrand, W.; Yan, S. D.; Fragione, B.; Stern, D.; Zlokovic, B.
V.
CS (1) Dep. Neurosurgery, USC Sch. Med., Children's Hosp. L.A., Los Angeles,
CA 90033 USA
SO Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 726.
Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part 1
Los Angeles, California, USA November 7-12, 1998 Society for Neuroscience
. ISSN: 0190-5295.
DT Conference
LA English

L6 ANSWER 9 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1999:52634 BIOSIS
DN PREV199900052634
TI Characterization of the ***receptor*** for ***advanced*** ***glycation*** ***endproducts*** (RAGE) in brain samples and
cultures from Alzheimer's disease and normal elderly patients.
AU Lue, L.-F. (1); Shen, Y. (1); Yan, S.; Stern, D.; Rogers, J. (1)
CS (1) Roberts Alzheimer's Res. Cent., Sun Health Res. Inst., Sun City, AZ
85372 USA
SO Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 720.
Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part 1
Los Angeles, California, USA November 7-12, 1998 Society for Neuroscience
. ISSN: 0190-5295.
DT Conference
LA English

L6 ANSWER 10 OF 21 CAPLUS COPYRIGHT 1999 ACS
AN 1997:525836 CAPLUS
DN 127:204001
TI Binding of .beta.- ***amyloid*** protein by an advanced glycation
end-product receptor and possible treatment of Alzheimer's disease
IN Stern, David; Schmidt, Ann Marie; Yan, Shi Du
PA Trustees of Columbia University, USA
SO PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 9726913 A1 19970731 WO 1997-US857 19970121
W: AU, CA, JP, MX
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AU 9718327 A1 19970820 AU 1997-18327 19970121
PRAI US 1996-592070 19960126
WO 1997-US857 19970121
AB The .beta.- ***amyloid*** protein binds to a cell-surface RAGE (
receptor for ***advanced*** ***glycation*** ***end***
products) in neural cells and induces neurotoxic damage typical of Alzheimer's disease. This interaction may be a useful target for treatment of Alzheimer's disease. Binding assays for the identification and characterization of .beta.- ***amyloid*** -binding proteins used to identify the interaction of .beta.- ***amyloid*** with RAGE are described. Peptides capable of inhibiting the interaction are reported.

L6 ANSWER 11 OF 21 MEDLINE DUPLICATE 5
AN 97289760 MEDLINE
DN 97289760
TI ***Amyloid*** -beta peptide- ***receptor*** for ***advanced***
glycation ***endproduct*** interaction elicits neuronal expression of macrophage-colony stimulating factor: a proinflammatory pathway in Alzheimer disease.
AU Du Yan S; Zhu H; Fu J; Yan S F; Roher A; Tourtellotte W W; Rajavashisth T; Chen X; Godman G C; Stern D; Schmidt A M
CS Department of Pathology, Columbia University, College of Physicians and Surgeons, New York, NY 10032, USA.
NC AG00690 (NIA)
AG00602 (NIA)
AG11925 (NIA)
+
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1997 May 13) 94 (10) 5296-301.
Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199708
AB In Alzheimer disease (AD), neurons are thought to be subjected to the deleterious cytotoxic effects of activated microglia. We demonstrate that binding of ***amyloid*** -beta peptide (Abeta) to neuronal ***Receptor*** for ***Advanced*** ***Glycation*** ***Endproduct*** (RAGE), a cell surface receptor for Abeta, induces macrophage-colony stimulating factor (M-CSF) by an oxidant sensitive, nuclear factor kappaB-dependent pathway. AD brain shows increased neuronal expression of M-CSF in proximity to Abeta deposits, and in cerebrospinal fluid from AD patients there was approximately 5-fold increased M-CSF antigen ($P < 0.01$), compared with age-matched controls. M-CSF released by Abeta-stimulated neurons interacts with its cognate receptor, c-fms, on microglia, thereby triggering chemotaxis, cell proliferation, increased expression of the macrophage scavenger receptor and apolipoprotein E, and enhanced survival of microglia exposed to Abeta, consistent with pathologic findings in AD. These data delineate an inflammatory pathway triggered by engagement of Abeta on neuronal RAGE. We suggest that M-CSF, thus generated, contributes to the pathogenesis of AD, and that M-CSF in cerebrospinal fluid might provide a means for monitoring neuronal perturbation at an early stage in AD.

L6 ANSWER 12 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1997:531767 BIOSIS
DN PREV199799830970
TI Rage and A-beta in Alzheimer disease (AD): Cell surface receptor attracts fibrils and soluble receptor prevents fibrillogenesis.
AU Yan, S. D.; Levine, H. (1); Soto, C.; Zhu, A.; Zhu, H.; Chen, X.; Roher, A.; Stern, D.; Schmidt, A. M.
CS (1) Dep. Pathology, Columbia Univ., New York, NY 10032 USA
SO Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 1883.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience New Orleans, Louisiana, USA October 25-30, 1997
ISSN: 0190-5295.
DT Conference; Abstract; Conference
LA English

L6 ANSWER 13 OF 21 MEDLINE DUPLICATE 6
AN 97410110 MEDLINE
DN 97410110
TI Beta ***amyloid*** toxicity does not require RAGE protein.
AU Liu Y; Dargusch R; Schubert D
CS The Salk Institute for Biological Studies, La Jolla California 92037, USA.
NC NS09658 (NINDS)
NS28121 (NINDS)
NS10279 (NINDS)
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1997 Aug 8) 237 (1) 37-40.
Journal code: 9Y8. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199711
EW 19971102
AB It has been suggested that a ***receptor*** for ***advanced***
glycation ***end*** products (RAGE) is the nerve cell receptor for ***amyloid*** beta protein (A beta). To determine if this is indeed the case, two neural cell lines as well as rat cortical neurons were examined for the presence of the mRNA for RAGE by PCR and northern blot analysis. Although lung was strongly positive, in no case was RAGE mRNA detected in the cultured neural cells. Glycated-albumin is a major ligand for RAGE and the cell surface RAGE protein is trypsin sensitive. In agreement with the mRNA data, trypsin treatment did not alter A beta toxicity, nor did glycated albumin modify the A beta response. It follows that RAGE is not the neural receptor for A beta.

L6 ANSWER 14 OF 21 CAPLUS COPYRIGHT 1999 ACS
AN 1997:264711 CAPLUS
DN 126:315587
TI Neurotoxicity of A.beta.- ***amyloid***
AU Yanagisawa, Katsuhiko
CS Natl. Inst. Longevity Sci., Natl. Chubu Hosp., Obu, 474, Japan
SO Dementia Jpn. (1997), 11(1), 34-42
CODEN: DEJAFB; ISSN: 1342-646X
PB Esu Ato K.K.
DT Journal; General Review
LA Japanese
AB A review with 33 refs. Neurotoxic mechanisms of ***amyloid***
.beta.-protein (A.beta.) discussed; the toxicity closely correlates with free radical generation. The suppressing activity of oxygen stress and neurotoxicity of A.beta. by apolipoprotein E are by the order of E2 < E3 < E4. A.beta. induces expression of tau protein kinase I (TPK-I) in cultured nerve cells, and the antisense oligonucleotide of TPK-I suppresses neurotoxicity of A.beta.. Protein kinase C is induced or

suppressed by A.beta. depending on the concn. A.beta. suppresses the
activity of phosphatidylinositol 4-kinase and binding of fibronectin to
cells. A.beta. elevates intracellular Ca concn., and enhances elevation
of intracellular Ca concn. by glutamic acid or calcium ionophore, A23187.
A.beta. forms a pore in membrane by hexamer formation with hair pin
structure. A.beta. induces functional anomaly in K channel, and induces
secretion of cytokines in some cell lines. A.beta. suppresses
ubiquitin-dependent protein degrdn. by inhibition of 26S proteasome.
A.beta. generates oxygen stress and secretion of cytotoxic cytokines as
tumor necrosis factor .alpha. (TNF.alpha.) through binding to
receptor for ***advanced*** ***glycation*** ***endo***
product (RAGE) and scavenger receptor (SR).

L6 ANSWER 15 OF 21 MEDLINE
AN 97452789 MEDLINE
DN 97452789
TI New insights into the neuropathology and cell biology of Alzheimer's
disease.
AU Weldon D T; Maggio J E; Mantyh P W
CS Department of Psychiatry, University of Minnesota, Minneapolis, USA.
SO GERIATRICS, (1997 Sep) 52 Suppl 2 S13-6. Ref: 12
Journal code: FO1. ISSN: 0016-867X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199712
AB Several lines of evidence, including newly discovered genetic mutations,
suggest that beta- ***amyloid*** (A beta) is directly involved in the
neuropathology observed in familial and sporadic forms of Alzheimer's
disease (AD). Rather than exerting its neurotoxicity directly, results
from our laboratory suggest that fibrillar A beta (fA beta) activates
microglia and astrocytes upon injection into the rat brain. The microglia
and astrocytes, in turn, form a functional barrier between A beta and
surrounding neurons. An increase in inducible nitric oxide synthase (iNOS)
immunoreactivity is observed in activated microglia and astrocytes, and
specific subpopulations of neurons are lost in fA beta injection areas
versus controls. These data, coupled with recent discoveries of the A beta
association with the ***receptor*** for ***advanced***
glycation ***end*** products (RAGE) and the class A scavenger
receptors (SR), support the hypothesized role of inflammatory mechanisms
in AD neurotoxicity.

L6 ANSWER 16 OF 21 MEDLINE DUPLICATE 7
AN 96379656 MEDLINE
DN 96379656
TI The ***receptor*** for ***advanced*** ***glycation***
end products (RAGE) is a central mediator of the interaction of
AGE-beta2microglobulin with human mononuclear phagocytes via an
oxidant-sensitive pathway. Implications for the pathogenesis of
dialysis-related ***amyloidosis*** .
AU Miyata T; Hori O; Zhang J; Yan S D; Ferran L; Iida Y; Schmidt A M
CS Department of Internal Medicine, Branch Hospital, Nagoya University School
of Medicine, Japan.
NC AG00602 (NIA)
HL21006 (NHLBI)
SO JOURNAL OF CLINICAL INVESTIGATION, (1996 Sep 1) 98 (5) 1088-94.
Journal code: HS7. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 199701
EW 19970104
AB An important component of ***amyloid*** fibrils in dialysis-related
amyloidosis is a form of beta2microglobulin modified with advanced
glycation end products (AGEs) of the Maillard reaction, known as
AGE-beta2M. We demonstrate here that the interaction of AGE-beta2M with
mononuclear phagocytes (MPs), cells important in the pathogenesis of the
inflammatory arthropathy of dialysis-related ***amyloidosis*** , is
mediated by the receptor for AGEs, or RAGE. 125I-AGE-beta2M bound to
immobilized RAGE or to MPs in a specific, dose-dependent manner (Kd
approximately 53.5 and approximately 81.6 nM, respectively), a process
inhibited in the presence of RAGE blockade.
AGE-beta2M-mediated monocyte
chemotaxis was prevented by excess sRAGE or anti-RAGE IgG. Induction of
tumor necrosis factor-alpha (TNF) expression by MPs exposed to AGE-beta2M
resulted from engagement of RAGE, as appearances of TNF transcripts and
TNF antigen release into culture supernatants were prevented by addition
of sRAGE, a process mediated, at least in part, by oxidant stress.
AGE-beta2M reduced cytochrome c and the elaboration of TNF by MPs was
inhibited by N-acetylcysteine. Consistent with these data,
immunohistochemical studies of AGE-laden ***amyloid*** deposits of a
long-term hemodialysis patient revealed positive staining for RAGE in the
MPs infiltrating these lesions. These data indicate that RAGE is a central
binding site for AGEs formed in vivo and suggest that AGE-beta2M-MP-RAGE
interaction likely contributes to the initiation of an inflammatory
response in ***amyloid*** deposits of long-term hemodialysis patients,
a process which may ultimately lead to bone and joint destruction.

L6 ANSWER 17 OF 21 MEDLINE DUPLICATE 8
AN 96345664 MEDLINE
DN 96345664
TI RAGE and ***amyloid*** -beta peptide neurotoxicity in Alzheimer's
disease [see comments].
CM Comment in: Nature 1996 Aug 22;382(6593):674
AU Yan S D; Chen X; Fu J; Chen M; Zhu H; Roher A; Slattery T; Zhao L;
Nagashima M; Morser J; Migheli A; Nawroth P; Stern D; Schmidt A M
CS Department of Pathology, Columbia University, College of Physicians and
Surgeons, New York 10032, USA.
SO NATURE, (1996 Aug 22) 382 (6593) 685-91.
Journal code: NSC. ISSN: 0028-0836.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199611
AB ***Amyloid*** -beta peptide is central to the pathology of Alzheimer's
disease, because it is neurotoxic--directly by inducing oxidant stress,
and indirectly by activating microglia. A specific cell-surface acceptor
site that could focus its effects on target cells has been postulated but
not identified. Here we present evidence that the ' ***receptor*** for
advanced ***glycation*** ***end*** products'

(RAGE) is
such a receptor, and that it mediates effects of the peptide on neurons
and microglia. Increased expressing of RAGE in Alzheimer's disease brain
indicates that it is relevant to the pathogenesis of neuronal dysfunction
and death.

L6 ANSWER 18 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:347965 BIOSIS
DN PREV199699070321
TI RAGE: A receptor upregulated in Alzheimer's disease on neurons, microglia,
and cerebrovascular endothelium that binds ***amyloid*** -beta peptide
and mediates induction of oxidant stress.
AU Yan, Shi Du; Chen, X.; Fu, J.; Chen, M.; Godman, G.; Stern, D.; Schmidt,
A.-M.
CS New York, NY USA
SO Neurology, (1996) Vol. 46, No. 2 SUPPL., pp. A276.
Meeting Info.: 48th Annual Meeting of the American Academy of Neurology
San Francisco, California, USA March 23-30, 1996
ISSN: 0028-3878.
DT Conference
LA English

L6 ANSWER 19 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:493978 BIOSIS
DN PREV199699216334
TI Rage in Alzheimer's disease: A receptor mediating ***amyloid*** -beta
peptide-induced activation of microglia.
AU Yan, Shi-Du (1); Chen, Xi; Fu, Jin; Chen, Ming; Zhu, Huaijie; Zhao, Lei;
Nagashima, Mariko; Morser, John; Roher, Alex; Stern, David; Schmidt, Ann
Marie
CS (1) Columbia Univ., New York, NY 10032 USA
SO Society for Neuroscience Abstracts, (1996) Vol. 22, No. 1-3, pp. 194.
Meeting Info.: 26th Annual Meeting of the Society for Neuroscience
Washington, D.C., USA November 16-21, 1996
ISSN: 0190-5295.
DT Conference
LA English

L6 ANSWER 20 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:5210 BIOSIS
DN PREV199698577345
TI Monocyte/macrophage interaction of nonenzymatically glycated
beta-2-microglobulin (beta-2M) is mediated by the ***receptor*** for
advanced ***glycation*** ***end*** products (AGEs): Role
in the pathogenesis of dialysis-related ***amyloidosis*** (DRA.
AU Iida, Yoshiyasu; Miyata, Toshio; Maeda, Kenji; Hori, Osamu; Stern, David;
Schmidt, Ann M.
CS Dep. Inter. Med., Branch Hosp., Nagoya Univ. Sch. Med., Nagoya Japan
SO Journal of the American Society of Nephrology, (1995) Vol. 6, No. 3, pp.
536.
Meeting Info.: Annual Meeting of the American Society of Nephrology San
Diego, California, USA November 5-8, 1995
ISSN: 1046-6673.
DT Conference
LA English

L6 ANSWER 21 OF 21 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1995:8108 BIOSIS
DN PREV199598022408
TI The mononuclear phagocyte interaction site of beta-2-microglobulin
modified by glycation is the ***receptor*** for ***advanced***
glycation ***endproducts*** .
AU Schmidt, Ann Marie (1); Hori, Osamu; Yan, Shi Du; Ogawa, Satoshi; Stern,
David; Miyata, Toshio
CS (1) Columbia Univ., New York, NY USA
SO Circulation, (1994) Vol. 90, No. 4 PART 2, pp. I233.
Meeting Info.: 67th Scientific Sessions of the American Heart Association
Dallas, Texas, USA November 14-17, 1994
ISSN: 0009-7322.
DT Conference
LA English

=> e stern david/au

E1 1 STERN DARRYL/AU
E2 4 STERN DARRYL A/AU
E3 221 --> STERN DAVID/AU
E4 11 STERN DAVID A/AU
E5 97 STERN DAVID B/AU
E6 1 STERN DAVID BENJAMIN/AU
E7 2 STERN DAVID E/AU
E8 76 STERN DAVID F/AU
E9 1 STERN DAVID FREDERICK/AU
E10 2 STERN DAVID H/AU
E11 4 STERN DAVID I/AU
E12 78 STERN DAVID L/AU

=> s e3

L7 221 "STERN DAVID"/AU

=> s l7 and l1

L8 31 L7 AND L1

=> dup rem l8

PROCESSING COMPLETED FOR L8
L9 24 DUP REM L8 (7 DUPLICATES REMOVED)

=> s l8 and presen?/ab,bi

'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
L10 9 L8 AND PRESEN?/AB,BI

=> dup rem l10

PROCESSING COMPLETED FOR L10
L11 7 DUP REM L10 (2 DUPLICATES REMOVED)

=> d 1- bib ab

YOU HAVE REQUESTED DATA FROM 7 ANSWERS - CONTINUE? Y/(N):y

L11 ANSWER 1 OF 7 CAPLUS COPYRIGHT 1999 ACS
AN 1999:691229 CAPLUS
DN 131:317761
TI Inhibition of tumor invasion or spreading based on a soluble ***receptor*** for ***advanced*** ***glycation*** ***endproducts***
IN Schmidt, Ann Marie; ***Stern, David***
PA The Trustees of Columbia University in the City of New York, USA
SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9954485	A1	19991028	WO 1999-US8427	19990416

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI US 1998-62365 19980417
AB The ***present*** invention provides for a method for inhibiting tumor
invasion or metastasis in a subject which comprises administering to the
subject a therapeutically effective amt. of a form of sol.
receptor for ***advanced*** ***glycation***
endproducts (RAGE). Interruption of cellular RAGE-extracellular
matrix (amphoterin and/or similar structures) interaction appears to be at
least one mechanism by which sRAGE limits tumor growth. The
present invention also provides a method for evaluating the
ability of an agent to inhibit tumor invasion in a local cellular
environment which comprises: (a) admixing with cell culture media an
effective amt. of the agent; (b) contacting a tumor cell in cell culture
with the media from step (a); (c) detg. the amt. of spreading of the tumor
cell culture, and (d) comparing the amt. of spreading of the tumor cell
culture detd. in step (c) with the amt. detd. in the absence of the agent,
thus evaluating the ability of the agent to inhibit tumor invasion in the
local cellular environment. The ***present*** invention also provides
a pharmaceutical compn. which comprises a therapeutically effective amt.
of the agent evaluated in the aforementioned method and a pharmaceutically
acceptable carrier.

L11 ANSWER 2 OF 7 CAPLUS COPYRIGHT 1999 ACS
AN 1999:265908 CAPLUS
DN 130:301683
TI Ligand-binding site of RAGE (***receptor*** for ***advanced***
glycation ***endproduct***) for therapeutic use
IN ***Stern, David*** ; Yan, Shi Du; Schmidt, Ann Marie; Lamster, Ira
PA The Trustees of Columbia University In the City of New York, USA
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9918987	A1	19990422	WO 1998-US21346	19981009

W: AU, CA, JP, MX
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE
AU 9897958 A1 19990503 AU 1998-97958 19981009
PRAI US 1997-948131 19971009
WO 1998-US21346 19981009
AB The ***present*** method provides for an isolated peptide having an
amino acid sequence corresponding to the amino acid sequence of a V-domain
of a ***receptor*** for ***advanced*** ***glycation***
end product (RAGE). The ***present*** invention also provides
for an isolated peptide having an amino acid sequence A-Q-N-I-T-A-R-I-G-E-
P-L-V-L-K-C-K-G-A-P-K-K-P-P-Q-R-L-E-W-K (Seq. ID No. 1). The
present invention provides for a pharmaceutical compn. comprising
a therapeutically effective amt. of an isolated peptide having an amino
acid sequence corresponding to the amino acid sequence of a V-domain of
RAGE. The ***present*** invention also provides for a method for
inhibiting interaction of an amyloid-.beta. peptide with a
receptor for ***advanced*** ***glycation***
end
product which is on the surface of a cell, which comprises contacting the
cell with the peptide or a functionally equiv. agent, wherein the peptide
or agent is capable of inhibiting interaction of the amyloid-.beta.
peptide with the ***receptor*** for ***advanced***
glycation ***end*** product, and the peptide or agent is
present in an amt. effective to inhibit interaction of the
amyloid-.beta. peptide with the ***receptor*** for ***advanced***
glycation ***end*** product.

L11 ANSWER 3 OF 7 CAPLUS COPYRIGHT 1999 ACS
AN 1999:434649 CAPLUS
DN 131:212851
TI RAGE mediates a novel proinflammatory axis: a central cell surface
receptor for S100/calgranulin polypeptides
AU Hofmann, Marion A.; Drury, Steven; Fu, Caifeng; Qu, Wu; Taguchi, Akihiko;
Lu, Yan; Avila, Cecilia; Kambham, Neeraja; Bierhaus, Angelika; Nawroth,
Peter; Neurath, Markus F.; Slattery, Timothy; Beach, Dale; McClary, John;
Nagashima, Mariko; Morser, John; ***Stern, David*** ; Schmidt, Ann
Marie
CS College of Physicians and Surgeons, Columbia University, New York, NY,
10032, USA
SO Cell (Cambridge, Mass.) (1999), 97(7), 889-901
CODEN: CELLB5; ISSN: 0092-8674
PB Cell Press
DT Journal
LA English
AB S100/calgranulin polypeptides are ***present*** at sites of
inflammation, likely released by inflammatory cells targeted to such loci
by a range of environmental cues. The authors report here that receptor
for AGE (advanced glycation end products) (RAGE) is a central cell surface
receptor for EN-RAGE (extracellular newly identified RAGE-binding protein)
and related members of the S100/calgranulin superfamily. Interaction of
EN-RAGEs with cellular RAGE on endothelium, mononuclear phagocytes, and
lymphocytes triggers cellular activation, with generation of key
proinflammatory mediators. Blockade of EN-RAGE/RAGE quenches delayed-type
hypersensitivity and inflammatory colitis in murine models by arresting
activation of central signaling pathways and expression of inflammatory
gene mediators. These data highlight a novel paradigm in inflammation and
identify roles for EN-RAGEs and RAGE in chronic cellular activation and
tissue injury.

L11 ANSWER 4 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 1
AN 1998:437309 BIOSIS
DN PREV199800437309
TI Human blood-brain barrier receptors for Alzheimer's amyloid-beta 1-40.
Asymmetrical binding, endocytosis, and transcytosis at the apical side of
brain microvascular endothelial cell monolayer.
AU Mackic, Jasmina B.; Stins, Monique; McComb, J. Gordon; Calero, Miguel;
Ghiso, Jorge; Kim, Kwang Sik; Yan, Shi Du; ***Stern, David*** ;
Schmidt, Ann Marie; Fragione, Blas; Zlokovic, Berislav V. (1)
CS (1) USC Sch. Med., 2025 Zonal Ave., RMR 506, Los Angeles, CA 90033 USA
SO Journal of Clinical Investigation, (Aug. 15, 1998) Vol. 102, No. 4, pp.
734-743.
ISSN: 0021-9738.

DT Article
LA English
AB A soluble monomeric form of Alzheimer's amyloid-beta (1-40) peptide
(sAbeta1-40) is ***present*** in the circulation and could contribute
to neurotoxicity if it crosses the brain capillary endothelium, which
comprises the blood-brain barrier (BBB) in vivo. This study characterizes
endothelial binding and transcytosis of a synthetic peptide homologous to
human sAbeta1-40 using an in vitro model of human BBB. 125I-sAbeta1-40
binding to the brain microvascular endothelial cell monolayer was time
dependent, polarized to the apical side, and saturable with high- and
low-affinity dissociation constants of 7.8 +- 1.2 and 52.8 +- 6.2 nM,
respectively. Binding of 125I-sAbeta1-40 was inhibited by anti-RAGE (
receptor for ***advanced*** ***glycation*** ***end***
products) antibody (63%) and by acetylated low density lipoproteins (33%).
Consistent with these data, transfected cultured cells overexpressing RAGE
or macrophage scavenger receptor (SR), type A, displayed binding and
internalization of 125I-sAbeta1-40. The internalized peptide remains
intact > 94%. Transcytosis of 125I-sAbeta1-40 was time and temperature
dependent, asymmetrical from the apical to basolateral side, saturable
with a Michaelis constant of 45 +- 9 nM, and partially sensitive to RAGE
blockade (36%) but not to SR blockade. We conclude that RAGE and SR
mediate binding of sAbeta1-40 at the apical side of human BBB, and that
RAGE is also involved in sAbeta1-40 transcytosis.

L11 ANSWER 5 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:425030 BIOSIS
DN PREV199699156086
TI RAGE and amyloid-beta peptide neurotoxicity in Alzheimer's disease.
AU Yan, Shi Du (1); Chen, Xi; Fu, Jin; Chen, Ming; Zhu, Huaijie; Roher, Alex;
Slattery, Timothy; Zhao, Lei; Nagashima, Mariko; Morser, John; Migheli,
Antonio; Nawroth, Peter; ***Stern, David*** ; Schmidt, Ann Marie
CS (1) Dep. Pathol., Columbia Univ., Coll. Physicians Surgeons, 630 West
168th St., New York, NY 10032 USA
SO Nature (London), (1996) Vol. 382, No. 6593, pp. 685-691.
ISSN: 0028-0836.
DT Article
LA English
AB Amyloid-beta peptide is central to the pathology of Alzheimer's disease,
because it is neurotoxic-directly by inducing oxidant stress, and
indirectly by activating microglia. A specific cell-surface acceptor site
that could focus its effects on target cells has been postulated but not
identified. Here we ***present*** evidence that the '***receptor***
for ***advanced*** ***glycation*** ***end*** products' (RAGE)
is such a receptor, and that it mediates effects of the peptide on neurons
and microglia. Increased expression of RAGE in Alzheimer's disease brain
indicates that it is relevant to the pathogenesis of neuronal dysfunction
and death.

L11 ANSWER 6 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 2
AN 1997:128146 BIOSIS
DN PREV199799419959
TI The ***receptor*** for ***advanced*** ***glycation***
end -products has a central role in mediating the effects of
advanced glycation end-products on the development of vascular disease in
diabetes mellitus.
AU Hori, Osamu (1); Yan, Shi Du; Ogawa, Satoshi; Kuwabara, Keisuke;
Matsumoto, Masayasu; ***Stern, David*** ; Schmidt, Ann Marie
CS (1) Dep. Physiol., Columbia Univ. Coll. Phys. Surg., New York, NY 10032
USA
SO Nephrology Dialysis Transplantation, (1996) Vol. 11, No. SUPPL. 5, pp.
13-16.
ISSN: 0931-0509.
DT Article
LA English
AB Proteins or lipids exposed to aldose sugars undergo initial and ultimately
irreversible modification resulting in the formation of so-called advanced
glycation end-products (AGEs). AGEs are postulated to be especially
important in the setting of diabetes mellitus due to hyperglycaemia
characteristic of this disorder. Our work has demonstrated that one of the
principal means by which AGEs interact with the vascular wall is by
interaction with their cellular receptor, the ***receptor*** for
advanced ***glycation*** ***end*** -products (RAGE), which
is ***present*** on the surface of endothelial cells, smooth muscle
cells, mesangial cells, mononuclear phagocytes and certain neurons. AGEs
interact with RAGE, resulting in the induction of monocyte chemotaxis as
well as oxidant stress. One of the consequences of AGE-RAGE-induced
cellular oxidant stress is the enhanced expression of vascular cell
adhesion molecule-1 on the endothelial surface, a critical consequence of
which is the attraction of mononuclear phagocytes into the vessel wall. In
both cases, the pro-inflammatory effects of AGEs may be inhibited in the
presence of RAGE blockade, using either anti-RAGE F(ab')-2 or
soluble RAGE, the extracellular domain of the molecule. These data suggest
that inhibition of RAGE may interfere with monocyte chemotaxis and
attraction into the vessel wall where AGEs deposit/form, suggesting the
potential of this intervention to interfere with a critical step in the
development of vascular disease, especially in patients with diabetes.

L11 ANSWER 7 OF 7 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1994:354438 BIOSIS
DN PREV199497367438
TI Survey of the distribution of a newly characterized ***receptor*** for
advanced ***glycation*** ***end*** products in tissues.
AU Brett, Jerold; Schmidt, Ann Marie; Yan, Shi Du; Zou, Yu Shan; Weideman,
Eliott; Pinsky, David; Nowygrod, Roman; Neeper, Michael; Przysiecki,
Craig; Shaw, Alan; Migheli, Antonio; ***Stern, David (1)***
CS (1) Dep. Physiology, P and S 11-518, Columbia Univ., Coll P and S, 630
West 168th Street, New York, NY 10032 USA
SO American Journal of Pathology, (1993) Vol. 143, No. 6, pp. 1699-1712.
ISSN: 0002-9440.
DT Article
LA English
AB Advanced glycation end products (AGEs), the final products of nonenzymatic
glycation and oxidation of proteins, are found in the plasma and
accumulate in the tissues during aging and at an accelerated rate in
diabetes. A novel integral membrane protein, termed receptor for AGE
(RAGE), forms a central part of the cell surface binding site for AGEs.
Using monospecific, polyclonal antibody raised to human recombinant and

bovine RAGE, immunostaining of bovine tissues showed RAGE in the vasculature, endothelium, and smooth muscle cells and in mononuclear cells in the tissues. Consistent with these data, RAGE antigen and mRNA were identified in cultured bovine endothelium, vascular smooth muscle, and monocyte-derived macrophages. RAGE antigen was also visualized in bovine cardiac myocytes as well as in cultures of neonatal rat cardiac myocytes and in neural tissue where motor neurons, peripheral nerves, and a population of cortical neurons were positive. In situ hybridization confirmed the ***presence*** of RAGE mRNA in the tissues, and studies with rat PC12 pheochromocytes indicated that they provide a neuronal-related cell culture model for examining RAGE expression. Pathological studies of human atherosclerotic plaques showed infiltration of RAGE-expressing cells in the expanded intima. These results indicate that RAGE is ***present*** in multiple tissues and suggest the potential relevance of AGE-RAGE interactions for modulating properties of the vasculature as well as neural and cardiac function, prominent areas of involvement in diabetes and in the normal aging process.

=> e yan shi du/au

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E1      1   YAN SHENTSHAN/AU
E2     19   YAN SHI/AU
E3     84 --> YAN SHI DU/AU
E4      1   YAN SHI EN/AU
E5     37   YAN SHI FANG/AU
E6      1   YAN SHI G/AU
E7      2   YAN SHI KAI/AU
E8      1   YAN SHI KUN/AU
E9      1   YAN SHI LEI/AU
E10     1   YAN SHI MING/AU
E11     1   YAN SHI PIN/AU
E12    62   YAN SHI PING/AU
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=> s e2-e3

L12 103 ("YAN SHI"/AU OR "YAN SHI DU"/AU)

=> s l12 and l1

L13 28 L12 AND L1

=> dup rem l13

PROCESSING COMPLETED FOR L13

L14 20 DUP REM L13 (8 DUPLICATES REMOVED)

=> d his

(FILE 'HOME' ENTERED AT 15:59:32 ON 27 DEC 1999)

FILE 'MEDLINE, EMBASE, BIOSIS, INPADOC, CAPLUS' ENTERED AT 15:59:45 ON 27 DEC 1999

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L1      158 S RECEPTOR FOR ADVANCED GLYCATION END?/AB,BI
L2      881 S PRESENILIN-2/AB,BI
L3        0 S L1 AND L2
L4    72912 S AMYLOID?/AB,BI
L5       44 S L1 AND L4
L6       21 DUP REM L5 (23 DUPLICATES REMOVED)
           E STERN DAVID/AU
L7      221 S E3
L8       31 S L7 AND L1
L9       24 DUP REM L8 (7 DUPLICATES REMOVED)
L10       9 S L8 AND PRESEN?/AB,BI
L11       7 DUP REM L10 (2 DUPLICATES REMOVED)
           E YAN SHI DU/AU
L12     103 S E2-E3
L13      28 S L12 AND L1
L14      20 DUP REM L13 (8 DUPLICATES REMOVED)
```

=> s l13 and l2

L15 0 L13 AND L2

=> d l14 1- bib ab

YOU HAVE REQUESTED DATA FROM 20 ANSWERS - CONTINUE? Y/(N):y

L14 ANSWER 1 OF 20 CAPLUS COPYRIGHT 1999 ACS
AN 1999:265908 CAPLUS
DN 130:301683
TI Ligand-binding site of RAGE (***receptor*** for ***advanced*** ***glycation*** ***endproduct***) for therapeutic use
IN Stern, David; ***Yan, Shi Du*** ; Schmidt, Ann Marie; Lamster, Ira
PA The Trustees of Columbia University In the City of New York, USA
SO PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9918987	A1	19990422	WO 1998-US21346	19981009
W: AU, CA, JP, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9897958	A1	19990503	AU 1998-97958	19981009

PRAI US 1997-948131 19971009
WO 1998-US21346 19981009

AB The present method provides for an isolated peptide having an amino acid sequence corresponding to the amino acid sequence of a V-domain of a ***receptor*** for ***advanced*** ***glycation*** ***end*** product (RAGE). The present invention also provides for an isolated peptide having an amino acid sequence A-Q-N-I-T-A-R-I-G-E-P-L-V-L-K-C-K-G-A-P-K-K-P-P-Q-R-L-E-W-K (Seq. ID No. 1). The present invention provides for a pharmaceutical compn. comprising a therapeutically effective amt. of an isolated peptide having an amino acid sequence corresponding to the amino acid sequence of a V-domain of RAGE. The present invention also provides for a method for inhibiting interaction of an amyloid-.beta. peptide with a ***receptor*** for ***advanced*** ***glycation*** ***end*** product which is on the surface of a cell, which comprises contacting the cell with the peptide or a functionally equiv. agent, wherein the peptide or agent is capable of inhibiting interaction of the amyloid-.beta. peptide with the ***receptor*** for ***advanced*** ***glycation*** ***end*** product, and the peptide or agent is present in an amt. effective to inhibit interaction of the amyloid-.beta. peptide with the ***receptor*** for ***advanced*** ***glycation*** ***end*** product.

L14 ANSWER 2 OF 20 CAPLUS COPYRIGHT 1999 ACS
AN 1999:717025 CAPLUS
TI N.epsilon.-(carboxymethyl)lysine adducts of proteins are ligands for ***receptor*** for ***advanced*** ***glycation*** ***end*** products that activate cell signaling pathways and modulate gene expression
AU Kislinger, Thomas; Fu, Caifeng; Huber, Birgit; Qu, Wu; Taguchi, Akihiko; ***Yan, Shi Du*** ; Hofmann, Marion; Yan, Shi Fang; Pischetsrieder, Monika; Stern, David; Schmidt, Ann Marie
CS College of Physicians & Surgeons, Columbia University, New

York, New York,
NY, 10032, USA
SO J. Biol. Chem. (1999), 274(44), 31740-31749
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
AB Recent studies suggested that interruption of the interaction of advanced glycation end products (AGEs), with the signal-transducing receptor receptor for AGE (RAGE), by administration of the sol., extracellular ligand-binding domain of RAGE, reversed vascular hyperpermeability and suppressed accelerated atherosclerosis in diabetic rodents. Since the precise mol. target of sol. RAGE in those settings was not elucidated, we tested the hypothesis that predominant specific AGEs within the tissues in disorders such as diabetes and renal failure, N.epsilon.-(carboxymethyl)lysine (CML) adducts, are ligands of RAGE. We demonstrate here that physiol. relevant CML modifications of proteins engage cellular RAGE, thereby activating key cell signaling pathways such as NF-.kappa.B and modulating gene expression. Thus, CML-RAGE interaction triggers processes intimately linked to accelerated vascular and inflammatory complications that typify disorders in which inflammation is an established component.

L14 ANSWER 3 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS DUPLICATE 1
AN 1999:217923 BIOSIS
DN PREV199900217923
TI Activation of ***receptor*** for ***advanced*** ***glycation*** ***end*** products: A mechanism for chronic vascular dysfunction in diabetic vasculopathy and atherosclerosis.
AU Schmidt, Ann Marie (1); ***Yan, Shi Du*** ; Wautier, Jean-Luc; Stern, David
CS (1) Department of Surgery, P and S 17-501, College of Physicians and Surgeons of Columbia University, 630 W 168th St, New York, NY, 10032 USA
SO Circulation Research, (March 19, 1999) Vol. 84, No. 5, pp. 489-497.
ISSN: 0009-7330.
DT General Review
LA English
SL English
AB ***Receptor*** for ***advanced*** ***glycation*** ***end*** products (RAGE) is a member of the immunoglobulin superfamily of cell surface molecules and engages diverse ligands relevant to distinct pathological processes. One class of RAGE ligands includes glycoxidation products, termed advanced glycation end products, which occur in diabetes, at sites of oxidant stress in tissues, and in renal failure and amyloidoses. RAGE also functions as a signal transduction receptor for amyloid beta peptide, known to accumulate in Alzheimer disease in both affected brain parenchyma and cerebral vasculature. Interaction of RAGE with these ligands enhances receptor expression and initiates a positive feedback loop whereby receptor occupancy triggers increased RAGE expression, thereby perpetuating another wave of cellular activation. Sustained expression of RAGE by critical target cells, including endothelium, smooth muscle cells, mononuclear phagocytes, and neurons, in proximity to these ligands, sets the stage for chronic cellular activation and tissue damage. In a model of accelerated atherosclerosis associated with diabetes in genetically manipulated mice, blockade of cell surface RAGE by infusion of a soluble, truncated form of the receptor completely suppressed enhanced formation of vascular lesions. Amelioration of atherosclerosis in these diabetic/atherosclerotic animals by soluble RAGE occurred in the absence of changes in plasma lipids or glycemia, emphasizing the contribution of a lipid- and glycemia-independent mechanism(s) to atherogenesis, which we postulate to be interaction of RAGE with its ligands. Future studies using mice in which RAGE expression has been genetically manipulated and with selective low molecular weight RAGE inhibitors will be required to definitively assign a critical role for RAGE activation in diabetic vasculopathy. However, sustained receptor expression in a microenvironment with a plethora of ligand makes possible prolonged receptor stimulation, suggesting that interaction of cellular RAGE with its ligands could be a factor contributing to a range of important chronic disorders.

L14 ANSWER 4 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS DUPLICATE 2
AN 1998:437309 BIOSIS
DN PREV199800437309
TI Human blood-brain barrier receptors for Alzheimer's amyloid-beta 1-40.
AU Mackic, Jasmina B.; Stins, Monique; McComb, J. Gordon; Calero, Miguel; Ghiso, Jorge; Kim, Kwang Sik; ***Yan, Shi Du*** ; Stern, David; Schmidt, Ann Marie; Fragione, Blas; Zlokovic, Berislav V. (1)
CS (1) USC Sch. Med., 2025 Zonal Ave., RMR 506, Los Angeles, CA 90033 USA
SO Journal of Clinical Investigation, (Aug. 15, 1998) Vol. 102, No. 4, pp. 734-743.
ISSN: 0021-9738.
DT Article
LA English
AB A soluble monomeric form of Alzheimer's amyloid-beta (1-40) peptide (sAbeta1-40) is present in the circulation and could contribute to neurotoxicity if it crosses the brain capillary endothelium, which comprises the blood-brain barrier (BBB) in vivo. This study characterizes endothelial binding and transcytosis of a synthetic peptide homologous to human sAbeta1-40 using an in vitro model of human BBB. 125I-sAbeta1-40 binding to the brain microvascular endothelial cell monolayer was time dependent, polarized to the apical side, and saturable with high- and low-affinity dissociation constants of 7.8 +- 1.2 and 52.8 +- 6.2 nM, respectively. Binding of 125I-sAbeta1-40 was inhibited by anti-RAGE (***receptor*** for ***advanced*** ***glycation*** ***end*** products) antibody (63%) and by acetylated low density lipoproteins (33%). Consistent with these data, transfected cultured cells overexpressing RAGE or macrophage scavenger receptor (SR), type A, displayed binding and internalization of 125I-sAbeta1-40. The internalized peptide remains intact > 94%. Transcytosis of 125I-sAbeta1-40 was time and temperature dependent, asymmetrical from the apical to basolateral side, saturable with a Michaelis constant of 45 +- 9 nM, and partially sensitive to RAGE blockade (36%) but not to SR blockade. We conclude that RAGE and SR mediate binding of sAbeta1-40 at the apical side of human BBB, and that RAGE is also involved in sAbeta1-40 transcytosis.

L14 ANSWER 5 OF 20 CAPLUS COPYRIGHT 1999 ACS
AN 1997:525836 CAPLUS
DN 127:204001
TI Binding of .beta.-amyloid protein by an advanced glycation end-product
receptor and possible treatment of Alzheimer's disease
IN Stern, David; Schmidt, Ann Marie; ***Yan, Shi Du***
PA Trustees of Columbia University, USA
SO PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9726913	A1	19970731	WO 1997-US857	19970121

W: AU, CA, JP, MX
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AU 9718327 A1 19970820 AU 1997-18327 19970121
PRAI US 1996-592070 19960126
WO 1997-US857 19970121
AB The .beta.-amyloid protein binds to a cell-surface RAGE (***receptor***
for ***advanced*** ***glycation*** ***end*** products) in
neural cells and induces neurotoxic damage typical of Alzheimer's disease.
This interaction may be a useful target for treatment of Alzheimer's
disease. Binding assays for the identification and characterization of
.beta.-amyloid-binding proteins used to identify the interaction of
.beta.-amyloid with RAGE are described. Peptides capable of inhibiting
the interaction are reported.

L14 ANSWER 6 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 3
AN 1997:262437 BIOSIS
DN PREV199799569040
TI Amyloid-beta peptide- ***receptor*** for ***advanced*** ***glycation*** ***endproduct*** interaction elicits neuronal
expression of macrophage-colony stimulating factor: A proinflammatory
pathway in Alzheimer disease.
AU ***Yan, Shi Du (1)*** ; Zhu, Huaijie; Fu, Jin; Yang, Shi Fang; Roher,
Alex; Tourtellotte, Wallace W.; Rajavashisth, Tripathi; Chen, Xi; Godman,
Gabriel C.; Stern, David; Schmidt, Ann Marie
CS (1) Dep. Pathol., Columbia Univ., Coll. Physicians Surgeons, New York, NY
10032 USA
SO Proceedings of the National Academy of Sciences of the United States of
America, (1997) Vol. 94, No. 10, pp. 5296-5301.
ISSN: 0027-8424.
DT Article
LA English
AB In Alzheimer disease (AD), neurons are thought to be subjected to the
deleterious cytotoxic effects of activated microglia. We demonstrate that
binding of amyloid-beta peptide (A-beta) to neuronal ***Receptor***
for ***Advanced*** ***Glycation*** ***Endproduct*** (RAGE), a
cell surface receptor for A-beta, induces macrophage-colony stimulating
factor (M-CSF) by an oxidant sensitive, nuclear factor kappa-B-dependent
pathway. AD brain shows increased neuronal expression of M-CSF in
proximity to A-beta deposits, and in cerebrospinal fluid from AD patients
there was apprxeq 5-fold increased M-CSF antigen (P lt 0.01), compared
with age-matched controls. M-CSF released by A-beta-stimulated neurons
interacts with its cognate receptor, c-fms, on microglia, thereby
triggering chemotaxis, cell proliferation, increased expression of the
macrophage scavenger receptor and apolipoprotein E, and enhanced survival
of microglia exposed to A-beta, consistent with pathologic findings in AD.
These data delineate an inflammatory pathway triggered by engagement of
A-beta on neuronal RAGE. We suggest that M-CSF, thus generated,
contributes to the pathogenesis of AD, and that M-CSF in cerebrospinal
fluid might provide a means for monitoring neuronal perturbation at an
early stage in AD.

L14 ANSWER 7 OF 20 CAPLUS COPYRIGHT 1999 ACS
AN 1997:337817 CAPLUS
DN 127:15986
TI The ***receptor*** for ***advanced*** ***glycation*** ***endproducts*** : implications for the development of diabetic vascular
disease
AU Hori, Osamu; ***Yan, Shi Du*** ; Schmidt, Ann Marie
CS Columbia University College of Physicians and Surgeons, New York, NY, USA
SO Fundam. Clin. Cardiol. (1997), 29(Endothelium in Clinical Practice),
311-329
CODEN: FCCAEH; ISSN: 1067-5264
PB Dekker
DT Journal; General Review
LA English
AB A review with 56 refs., including sections on identification of cellular
receptor for AGEs (advanced glycation end-products), interaction of AGEs
with mononuclear phagocyte RAGE (receptor for AGEs), interaction of AGEs
with endothelial cell RAGE, and blockade of RAGE as a potential target for
intervention in the development of vascular complications in diabetes.

L14 ANSWER 8 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1998:15376 BIOSIS
DN PREV199800015376
TI The V-domain of ***receptor*** for ***advanced*** ***glycation*** ***endproducts*** (RAGE) mediates binding of AGEs: A
novel target for therapy of diabetic complications.
AU Schmidt, Ann Marie; ***Yan, Shi Du*** ; Stern, David M.
CS Columbia Univ., New York, NY USA
SO Circulation, (10/21/97, 1997) Vol. 96, No. 8 SUPPL., pp. I37.
Meeting Info.: 70th Scientific Sessions of the American Heart Association
Orlando, Florida, USA November 9-12, 1997
ISSN: 0009-7322.
DT Conference
LA English

L14 ANSWER 9 OF 20 CAPLUS COPYRIGHT 1999 ACS
AN 1996:392878 CAPLUS
DN 125:111085
TI RAGE: a novel cellular ***receptor*** for ***advanced*** ***glycation*** ***end*** products
AU Schmidt, Ann Marie; Hori, Osamu; Cao, Rong; ***Yan, Shi Du*** ; Brett,
Jerold; Wautier, Jean-Luc; Ogawa, Satoshi; Kuwabara, Keisuke; Matsumoto,
Masayasu; Stern, David
CS Dep. Med. Physiol. Surgery, Columbia Univ., Coll. Physicians and Surgeons,
New York, NY, USA
SO Diabetes (1996), 45(Suppl. 3, Proceedings of the 15th International
Diabetes Federation Satellite Symposium on "Diabetes and Macrovascular
Complications", 1994), S77-S80
CODEN: DIAEAZ; ISSN: 0012-1797
DT Journal
LA English
AB Exposure of proteins to reducing sugars results in non-enzymic glycation
with the ultimate formation of advanced glycation end products (AGEs).
One means through which AGEs modulate cellular functions is through

binding to specific cell surface acceptor mols. The receptor for AGEs
(RAGE) is such a receptor and is a newly identified member of the Ig
superfamily expressed on endothelial cells (ECs), mononuclear phagocytes
(MPs), and vascular smooth muscle cells (SMCs) in both vivo and in vitro.
Binding of AGEs to RAGE results in induction of cellular oxidant stress,
as exemplified by the generation of thiobarbituric acid-reactive
substances, expression of heme oxygenase type I, and activation of the
transcription factor NF-kB, with consequences for a range of cellular
functions. AGEs on the surface of diabetic red cells enhance binding to
endothelial RAGE and result in enhanced oxidant stress in the vessel wall.
By using reagents to selectively block access to RAGE, the role of this
receptor in AGE-mediated perturbation of cellular properties can be
dissected in detail.

L14 ANSWER 10 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 4
AN 1996:480326 BIOSIS
DN PREV199699195582
TI The ***receptor*** for ***advanced*** ***glycation***
end products (RAGE) is a central mediator of the interaction of
AGE-beta-2microglobulin with human mononuclear phagocytes via an
oxidant-sensitive pathway: Implications for the pathogenesis of
dialysis-related amyloidosis.
AU Miyata, Toshio; Hori, Osamu; Zhang, Jinghua; ***Yan, Shi Du*** ;
Ferran, Luis; Iida, Yoshiyasu; Schmidt, An Marie (1)
CS (1) Columbia Univ. Coll. Physicinas and Surgeons, 630 W. 168th Street, P
and S 11-518, New York, NY 10032 USA
SO Journal of Clinical Investigation, (1996) Vol. 98, No. 5, pp. 1088-1094.
ISSN: 0021-9738.
DT Article
LA English
AB An important component of amyloid fibrils in dialysis-related amyloidosis
is a form of beta-2microglobulin modified with advanced glycation end
products (AGEs) of the Maillard reaction, known as AGE-beta-2M. We
demonstrate here that the interaction of AGE-beta-2M with mononuclear
phagocytes (MPs), cells important in the pathogenesis of the inflammatory
arthropathy of dialysis-related amyloidosis, is mediated by the receptor
for AGEs, or RAGE. 125I-AGE-beta-2M bound to immobilized RAGE or to MPs in
a specific, dose-dependent manner (K-d apprxeq 53.5 and apprxeq 81.6 nM,
respectively), a process inhibited in the presence of RAGE blockade.
AGE-beta-2M-mediated monocyte chemotaxis was prevented by excess sRAGE or
anti-RAGE IgG. Induction of tumor necrosis factor-alpha (TNF) expression
by MPs exposed to AGE-beta-2M resulted from engagement of RAGE, as
appearances of TNF transcripts and TNF antigen release into culture
supernatants were prevented by addition of sRAGE, a process mediated, at
least in part, by oxidant stress. AGE-beta-2M reduced cytochrome c and the
elaboration of TNF by MPs was inhibited by N-acetylcysteine. Consistent
with these data, immunohistochemical studies of AGE-laden amyloid deposits
of a long-term hemodialysis patient revealed positive staining for RAGE in
the MPs infiltrating these lesions. These data indicate that RAGE is a
central binding site for AGEs formed in vivo and suggest that
AGE-beta-2M-MP-RAGE interaction likely contributes to the initiation of an
inflammatory response in amyloid deposits of long-term hemodialysis
patients, a process which may ultimately lead to bone and joint
destruction.

L14 ANSWER 11 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 5
AN 1996:425030 BIOSIS
DN PREV199699156086
TI RAGE and amyloid-beta peptide neurotoxicity in Alzheimer's disease.
AU ***Yan, Shi Du (1)*** ; Chen, Xi; Fu, Jin; Chen, Ming; Zhu, Huaijie;
Roher, Alex; Slattery, Timothy; Zhao, Lei; Nagashima, Mariko; Morser,
John; Migheli, Antonio; Nawroth, Peter; Stern, David; Schmidt, Ann Marie
CS (1) Dep. Pathol., Columbia Univ., Coll. Physicians Surgeons, 630 West
168th St., New York, NY 10032 USA
SO Nature (London), (1996) Vol. 382, No. 6593, pp. 685-691.
ISSN: 0028-0836.
DT Article
LA English
AB Amyloid-beta peptide is central to the pathology of Alzheimer's disease,
because it is neurotoxic-directly by inducing oxidant stress, and
indirectly by activating microglia. A specific cell-surface acceptor site
that could focus its effects on target cells has been postulated but not
identified. Here we present evidence that the ' ***receptor*** for
advanced ***glycation*** ***end*** products' (RAGE) is
such a receptor, and that it mediates effects of the peptide on neurons
and microglia. Increased expression of RAGE in Alzheimer's disease brain
indicates that it is relevant to the pathogenesis of neuronal dysfunction
and death.

L14 ANSWER 12 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:347965 BIOSIS
DN PREV199699070321
TI RAGE: A receptor upregulated in Alzheimer's disease on neurons, microglia,
and cerebrovascular endothelium that binds amyloid-beta peptide and
mediates induction of oxidant stress.
AU ***Yan, Shi Du*** ; Chen, X.; Fu, J.; Chen, M.; Godman, G.; Stern, D.;
Schmidt, A.-M.
CS New York, NY USA
SO Neurology, (1996) Vol. 46, No. 2 SUPPL., pp. A276.
Meeting Info.: 48th Annual Meeting of the American Academy of Neurology
San Francisco, California, USA March 23-30, 1996
ISSN: 0028-3878.
DT Conference
LA English

L14 ANSWER 13 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:493978 BIOSIS
DN PREV199699216334
TI Rage in Alzheimer's disease: A receptor mediating amyloid-beta peptide-induced activation of microglia.
AU ***Yan, Shi-Du (1)*** ; Chen, Xi; Fu, Jin; Chen, Ming; Zhu, Huaijie;
Zhao, Lei; Nagashima, Mariko; Morser, John; Roher, Alex; Stern, David;
Schmidt, Ann Marie
CS (1) Columbia Univ., New York, NY 10032 USA
SO Society for Neuroscience Abstracts, (1996) Vol. 22, No. 1-3, pp. 194.
Meeting Info.: 26th Annual Meeting of the Society for Neuroscience
Washington, D.C., USA November 16-21, 1996
ISSN: 0190-5295.
DT Conference
LA English

L14 ANSWER 14 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:375628 BIOSIS
DN PREV199699097984
TI A novel cellular ***receptor*** for ***advanced*** ***glycation*** ***end*** products.
AU Schmidt, Ann Marie (1); Hori, Osamu; Cao, Rong; ***Yan, Shi Du*** ; Brett, Jerold; Wautier, Jean-Luc; Ogawa, Satoshi; Kuwabara, Keisuke; Matsumoto, Masayasu; Stern, David
CS (1) Dep. Physiol., P and S 11-518, Columbia Univ., Coll. Phys. Surg., 630 W. 168th, New York, NY 10032 USA
SO Diabetes, (1996) Vol. 45, No. SUPPL. 3, pp. S77-S80. ISSN: 0012-1797.
DT Article
LA English
AB Exposure of proteins to reducing sugars results in nonenzymatic glycation with the ultimate formation of advanced glycation end products (AGEs). One means through which AGEs modulate cellular functions is through binding to specific cell surface acceptor molecules. The receptor for AGEs (RAGE) is such a receptor and is a newly identified member of the immunoglobulin superfamily expressed on endothelial cells (ECs), mononuclear phagocytes (MPs), and vascular smooth muscle cells (SMCs) in both vivo and in vitro. Binding of AGEs to RAGE results in induction of cellular oxidant stress, as exemplified by the generation of thiobarbituric acid-reactive substances, expression of heme oxygenase type I, and activation of the transcription factor NF-kappa-B, with consequences for a range of cellular functions. AGEs on the surface of diabetic red cells enhance binding to endothelial RAGE and result in enhanced oxidant stress in the vessel wall. By using reagents to selectively block access to RAGE, the role of this receptor in AGE-mediated perturbation of cellular properties can be dissected in detail.

L14 ANSWER 15 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1997:2254 BIOSIS
DN PREV199799301457
TI An accelerated atherosclerosis model in diabetic apolipoprotein E knockout mice: Vascular accumulation of advanced glycation endproducts (AGEs) and enhanced expression of their cellular receptor, rage.
AU Park, Lisa (1); Hori, Osamu; ***Yan, Shi Du*** ; Zou, Yu Shan; Verstuyft, Judy; Rubin, Edward M.; Liu, Jiankang; Yeo, Helen C.; Ames, Bruce N.; Andaz, Shahriyour; Stern, David; Schmidt, Ann Marie
CS (1) Columbia Coll. Physicians Surgeons, New York, NY USA
SO Circulation, (1996) Vol. 94, No. 8 SUPPL., pp. I36. Meeting Info.: 69th Scientific Sessions of the American Heart Association New Orleans, Louisiana, USA November 10-13, 1996 ISSN: 0009-7322.
DT Conference; Abstract
LA English

L14 ANSWER 16 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 6
AN 1997:128146 BIOSIS
DN PREV199799419959
TI The ***receptor*** for ***advanced*** ***glycation*** ***end*** -products has a central role in mediating the effects of advanced glycation end-products on the development of vascular disease in diabetes mellitus.
AU Hori, Osamu (1); ***Yan, Shi Du*** ; Ogawa, Satoshi; Kuwabara, Keisuke; Matsumoto, Masayasu; Stern, David; Schmidt, Ann Marie
CS (1) Dep. Physiol., Columbia Univ. Coll. Phys. Surg., New York, NY 10032 USA
SO Nephrology Dialysis Transplantation, (1996) Vol. 11, No. SUPPL. 5, pp. 13-16. ISSN: 0931-0509.
DT Article
LA English
AB Proteins or lipids exposed to aldose sugars undergo initial and ultimately irreversible modification resulting in the formation of so-called advanced glycation end-products (AGEs). AGEs are postulated to be especially important in the setting of diabetes mellitus due to hyperglycaemia characteristic of this disorder. Our work has demonstrated that one of the principal means by which AGEs interact with the vascular wall is by interaction with their cellular receptor, the ***receptor*** for ***advanced*** ***glycation*** ***end*** -products (RAGE), which is present on the surface of endothelial cells, smooth muscle cells, mesangial cells, mononuclear phagocytes and certain neurons. AGEs interact with RAGE, resulting in the induction of monocyte chemotaxis as well as oxidant stress. One of the consequences of AGE-RAGE-induced cellular oxidant stress is the enhanced expression of vascular cell adhesion molecule-1 on the endothelial surface, a critical consequence of which is the attraction of mononuclear phagocytes into the vessel wall. In both cases, the pro-inflammatory effects of AGEs may be inhibited in the presence of RAGE blockade, using either anti-RAGE F(ab')-2 or soluble RAGE, the extracellular domain of the molecule. These data suggest that inhibition of RAGE may interfere with monocyte chemotaxis and attraction into the vessel wall where AGEs deposit/form, suggesting the potential of this intervention to interfere with a critical step in the development of vascular disease, especially in patients with diabetes.

L14 ANSWER 17 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1996:13661 BIOSIS
DN PREV199698585796
TI Receptor-dependent hyperfibrinogenemia in diabetic mice: Reversal by blockade of the ***receptor*** for ***advanced*** ***glycation*** ***endproducts*** .
AU Schmidt, Ann Marie; Hori, Osamu; Zhang, Jing; Cao, Rong; ***Yan, Shi*** *** Du*** ; Nagashima, Mariko; Fuentes, Nelson L.; Fuller, Gerald; Morset, John; Stern, David
CS Columbia Univ., New York, NY USA
SO Circulation, (1995) Vol. 92, No. 8 SUPPL., pp. I694. Meeting Info.: 68th Scientific Session of the American Heart Association Anaheim, California, USA November 13-16, 1995 ISSN: 0009-7322.
DT Conference
LA English

L14 ANSWER 18 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 7
AN 1994:478773 BIOSIS
DN PREV199497491773
TI ***Receptor*** for ***advanced*** ***glycation*** ***end*** products (AGEs) has a central role in vessel wall interactions and gene activation in response to circulating AGE proteins.
AU Schmidt, Ann Marie (1); Hasu, Mirela; Popov, Doina; Zhang, Jing Hua; Chen, Jingxian; ***Yan, Shi Du*** ; Brett, Jerold; Cao, Rong; Kuwabara, Keisuke; et al.
CS (1) Dep. Med., Columbia Univ., Coll. Physicians Surgeons, 630 West 168 Street, New York, NY 10032 USA
SO Proceedings of the National Academy of Sciences of the United States of America, (1994) Vol. 91, No. 19, pp. 8807-8811.

ISSN: 0027-8424.
DT Article
LA English
AB The extended interaction of aldoses with proteins or lipids results in
nonenzymatic glycation and oxidation, ultimately forming AGEs, the
presence of which in the plasma and vessel wall is associated with
diabetic vascular complications. We show here that AGE albumin in the
intravascular space interacts with the vessel wall via binding to an
integral membrane protein, receptor for AGE (RAGE), a member of the
immunoglobulin superfamily, resulting in clearance from the plasma and
induction of interleukin 6 mRNA. Intravenously infused 125I-AGE albumin
showed a rapid phase of plasma clearance with deposition in several
organs. Rapid removal of 125I-AGE albumin from the plasma was prevented by
administration of a soluble, truncated form of RAGE, which blocked binding
of 125I-labeled AGE albumin to cultured endothelial cells and mononuclear
phagocytes, as well as by pretreatment with anti-RAGE IgG. Ultrastructural
studies with AGE albumin-colloidal gold conjugates perfused in situ showed
that in murine coronary vasculature this probe was taken up by endothelial
plasmalemmal vesicles followed by transport either to the abluminal
surface or by accumulation in lysosomes. Consequences of AGE-RAGE
interaction included induction of interleukin 6 mRNA expression in mice.
These data indicate that RAGE mediates the interaction of AGEs with the
vessel wall, both for removal of these glycated proteins from the plasma
and for changes in gene expression.

L14 ANSWER 19 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1995:8108 BIOSIS
DN PREV199598022408
TI The mononuclear phagocyte interaction site of beta-2-microglobulin
modified by glycation is the ***receptor*** for ***advanced***
glycation ***endproducts*** .
AU Schmidt, Ann Marie (1); Hori, Osamu; ***Yan, Shi Du*** ; Ogawa,
Satoshi; Stern, David; Miyata, Toshio
CS (1) Columbia Univ., New York, NY USA
SO Circulation, (1994) Vol. 90, No. 4 PART 2, pp. I233.
Meeting Info.: 67th Scientific Sessions of the American Heart Association
Dallas, Texas, USA November 14-17, 1994
ISSN: 0009-7322.
DT Conference
LA English

L14 ANSWER 20 OF 20 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 8
AN 1994:354438 BIOSIS
DN PREV199497367438
TI Survey of the distribution of a newly characterized ***receptor*** for
advanced ***glycation*** ***end*** products in tissues.
AU Brett, Jerold; Schmidt, Ann Marie; ***Yan, Shi Du*** ; Zou, Yu Shan;
Weideman, Eliott; Pinsky, David; Nowygrod, Roman; Neeper, Michael;
Przysiecki, Craig; Shaw, Alan; Migheli, Antonio; Stern, David (1)
CS (1) Dep. Physiology, P and S 11-518, Columbia Univ., Coll P and S, 630
West 168th Street, New York, NY 10032 USA
SO American Journal of Pathology, (1993) Vol. 143, No. 6, pp. 1699-1712.
ISSN: 0002-9440.
DT Article
LA English
AB Advanced glycation end products (AGEs), the final products of nonenzymatic
glycation and oxidation of proteins, are found in the plasma and
accumulate in the tissues during aging and at an accelerated rate in
diabetes. A novel integral membrane protein, termed receptor for AGE
(RAGE), forms a central part of the cell surface binding site for AGEs.
Using monospecific, polyclonal antibody raised to human recombinant and
bovine RAGE, immunostaining of bovine tissues showed RAGE in the
vasculature, endothelium, and smooth muscle cells and in mononuclear cells
in the tissues. Consistent with these data, RAGE antigen and mRNA were
identified in cultured bovine endothelium, vascular smooth muscle, and
monocyte-derived macrophages. RAGE antigen was also visualized in bovine
cardiac myocytes as well as in cultures of neonatal rat cardiac myocytes
and in neural tissue where motor neurons, peripheral nerves, and a
population of cortical neurons were positive. In situ hybridization
confirmed the presence of RAGE mRNA in the tissues, and studies with rat
PC12 pheochromocytes indicated that they provide a neuronal-related cell
culture model for examining RAGE expression. Pathological studies of human
atherosclerotic plaques showed infiltration of RAGE-expressing cells in
the expanded intima. These results indicate that RAGE is present in
multiple tissues and suggest the potential relevance of AGE-RAGE
interactions for modulating properties of the vasculature as well as
neural and cardiac function, prominent areas of involvement in diabetes
and in the normal aging process.

=> e wolozin benjamin/au

E1	3	WOLOZIN BEN/AU
E2	1	WOLOZIN BENJAMEN L/AU
E3	35	--> WOLOZIN BENJAMIN/AU
E4	22	WOLOZIN BENJAMIN L/AU
E5	3	WOLOZIN M W/AU
E6	2	WOLOZIN R/AU
E7	1	WOLOZON B L/AU
E8	1	WOLOZSZUK R/AU
E9	1	WOLOZYN W/AU
E10	1	WOLP LAJOS/AU
E11	2	WOLPA BRENDA/AU
E12	1	WOLPA LORI J/AU

=> s e1-e4

L16 61 ("WOLOZIN BEN"/AU OR "WOLOZIN BENJAMEN L"/AU OR "WOLOZIN BENJAMI
N"/AU OR "WOLOZIN BENJAMIN L"/AU)

=> s l16 and l1

L17 0 L16 AND L1

=> s l16 and l2

L18 4 L16 AND L2

=> dup rem l18

PROCESSING COMPLETED FOR L18
L19 3 DUP REM L18 (1 DUPLICATE REMOVED)

=> d l- bib ab

YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L19 ANSWER 1 OF 3 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1998:224560 BIOSIS
DN PREV199800224560
TI Regulation of apoptosis by presenilin 1.
AU ***Wolozin, Benjamin (1)*** ; Alexander, P.; Palacino, J.
CS (1) Dep. Pharmacol., Loyola Univ. Medical Cent., Build. 102,

Room 3634,
2160 South First Ave., Maywood, IL 60153 USA
SO Neurobiology of Aging, (Jan.-Feb., 1998) Vol. 19, No. 1 SUPPL., pp.
S23-S27.
ISSN: 0197-4580.
DT Article
LA English
AB Familial Alzheimer's disease is transmitted as an autosomal dominant
disorder and, in 5-10% of the cases, is caused by mutations in the coding
regions of two homologous genes, Presenilin 1 and 2 (PS1 and PS2).
Previously, we have shown that PS2, a homolog of PS1, regulates apoptosis
induced in neurons by trophic withdrawal or Abeta, and in T-cells by Fas
ligand. We now report that PS1 also regulates apoptosis. Both wild-type
and the H115Y mutant form of PS1 enhance Fas-mediated apoptosis in Jurkat
cells. We also observed that wild-type and the H115Y mutant form of PS1
differentially regulate Jun Kinase, an important enzyme regulating
apoptosis.

L19 ANSWER 2 OF 3 CAPLUS COPYRIGHT 1999 ACS
AN 1996:761948 CAPLUS
DN 126:88246
TI Requirement of the familial Alzheimer's disease gene PS2 for apoptosis.
Opposing effect of ALG-3
AU Vito, Pasquale; ***Wolozin, Benjamin*** ; Ganjei, J. Kelly; Iwasaki,
Katsunori; Lacana, Emanuela; D'Adamio, Luciano
CS NIAID, Natl. Inst. Health, Bethesda, MD, 20892, USA
SO J. Biol. Chem. (1996), 271(49), 31025-31028
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
AB ALG-3, a truncated mouse homolog of the chromosome 1 familial Alzheimer's
disease gene PS2, rescues T hybridoma 3DO cells from T-cell
receptor-induced apoptosis by inhibiting Fas ligand induction and Fas
signaling. Here the authors show that ALG-3 transfected 3DO cells express
a COOH-terminal PS2 polypeptide. Overexpression of PS2 in ALG-3
transfected 3DO cells reconstitutes sensitivity to receptor-induced cell
death, suggesting that the artificial PS2 polypeptide functions as a
dominant neg. mutant of PS2. ALG-3 and antisense PS2 protect PC12 cells
from glutamate-induced apoptosis but not from death induced by hydrogen
peroxide or the free radical MPP+. Thus, the PS2 gene is required for
some forms of cell death in diverse cell types, and its function is
opposed by ALG-3.

L19 ANSWER 3 OF 3 BIOSIS COPYRIGHT 1999 BIOSIS
DUPLICATE 1
AN 1997:31943 BIOSIS
DN PREV199799338346
TI Participation of ***Presenilin*** ***2*** in apoptosis: Enhanced
basal activity conferred by an Alzheimer mutation.
AU ***Wolozin, Benjamin (1)*** ; Iwasaki, Katsunori; Vito, Pasquale;
Ganjei, J. Kelly; Lacana, Emanuela; Sunderland, Trey; Zhao, Boyu; Kusiak,
John W.; Wasco, Wilma; D'Adamio, Luciano
CS (1) Dep. Pharmacol., Loyola Univ. Med. Cent., 2160 South First Ave.,
Maywood, IL 60153 USA
SO Science (Washington D C), (1996) Vol. 274, No. 5293, pp. 1710-1713.
ISSN: 0036-8075.
DT Article
LA English
AB Overexpression of the familial Alzheimer's disease gene ***Presenilin***
2 (PS2) in nerve growth factor-differentiated PC12 cells increased
apoptosis induced by trophic factor withdrawal or beta-amyloid.
Transfection of antisense PS2 conferred protection against apoptosis
induced by trophic withdrawal in nerve growth factor-differentiated or
amyloid precursor protein-expressing PC12 cells. The apoptotic cell death
induced by PS2 protein was sensitive to pertussis toxin, suggesting that
heterotrimeric GTP-binding proteins are involved. A PS2 mutation
associated with familial Alzheimer's disease was found to generate a
molecule with enhanced basal apoptotic activity. This gain of function
might accelerate the process of neurodegeneration that occurs in
Alzheimer's disease, leading to the earlier age of onset characteristic of
familial Alzheimer's disease.

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(FILE 'HOME' ENTERED AT 15:59:32 ON 27 DEC 1999)

FILE 'MEDLINE, EMBASE, BIOSIS, INPADOC, CAPLUS' ENTERED AT 15:59:45 ON 27
DEC 1999
L1 158 S RECEPTOR FOR ADVANCED GLYCATION END?/AB,BI
L2 881 S PRESENILIN-2/AB,BI
L3 0 S L1 AND L2
L4 72912 S AMYLOID?/AB,BI
L5 44 S L1 AND L4
L6 21 DUP REM L5 (23 DUPLICATES REMOVED)
E STERN DAVID/AU
L7 221 S E3
L8 31 S L7 AND L1
L9 24 DUP REM L8 (7 DUPLICATES REMOVED)
L10 9 S L8 AND PRESEN?/AB,BI
L11 7 DUP REM L10 (2 DUPLICATES REMOVED)
E YAN SHI DU/AU
L12 103 S E2-E3
L13 28 S L12 AND L1
L14 20 DUP REM L13 (8 DUPLICATES REMOVED)
L15 0 S L13 AND L2
E WOLOZIN BENJAMIN/AU
L16 61 S E1-E4
L17 0 S L16 AND L1
L18 4 S L16 AND L2
L19 3 DUP REM L18 (1 DUPLICATE REMOVED)

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---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

	SINCE FILE ENTRY	TOTAL SESSION
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